



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICAICT405A Develop detailed technical design**

**Release: 1**

## ICAICT405A Develop detailed technical design

### Modification History

Release	Comments
Release 1	This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to assist in the development of a detailed technical design.

### Application of the Unit

This unit applies to individuals performing systems design tasks who are required to review and update technical design documents.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Assist in selecting technical design features	1.1 Select and revise design model based on iteration and design changes 1.2 Incorporate outstanding design points according to <b><i>acceptance criteria</i></b> 1.3 Distribute reports identifying changes and implications to <b><i>appropriate person</i></b> for review
2. Contribute to design review	2.1 Compare design against <b><i>requirements</i></b> and fix as necessary 2.2 Confirm design with appropriate person 2.3 Use <b><i>feedback mechanisms</i></b> to gather information on design changes from <b><i>client</i></b> 2.4 Incorporate design changes where required
3. Contribute to development of program specifications	3.1 Implement modules by incremental development techniques 3.2 Identify user authority for each module 3.3 Prepare detailed specifications of module implementation for each module that will not be incrementally built 3.4 Prepare documentation according to requirements of the <b><i>project</i></b>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication skills to liaise with client when:
  - transferring and collecting information
  - presenting information and gaining consensus on concepts
- literacy skills to prepare technical documentation
- problem-solving skills to:
  - develop algorithms
  - participate in the development of strategic initiatives
  - revise the design model
- technical skills to incorporate required changes to model.

### Required knowledge

- client business domain and client's critical business functions and processes
- current various life cycle options
- design fundamentals and refinement
- design quality metrics.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• design and prepare a clear and best-fit technical design for a set project, incorporating:             <ul style="list-style-type: none"> <li>• changes to design model based on user requirements</li> <li>• detailed specification of modules</li> <li>• updated documentation to reflect changes.</li> </ul> </li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• requirements model</li> <li>• business requirements</li> <li>• project deliverables</li> <li>• acceptance criteria</li> <li>• current information technology (IT) blueprint</li> <li>• appropriate learning and assessment support when required.</li> </ul> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• verbal or written questioning to assess candidate's knowledge of the principles of technical designs</li> <li>• review of project documentation, particularly including design model and module specifications</li> <li>• review of client-feedback mechanisms.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p>

	In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.
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## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b><i>Acceptance criteria</i></b> may include:	<ul style="list-style-type: none"> <li>• cost implications</li> <li>• logistical considerations</li> <li>• technical</li> <li>• timeframe.</li> </ul>
<b><i>Appropriate person</i></b> may include:	<ul style="list-style-type: none"> <li>• authorised business representative</li> <li>• client</li> <li>• supervisor.</li> </ul>
<b><i>Requirements</i></b> may relate to:	<ul style="list-style-type: none"> <li>• application</li> <li>• business</li> <li>• network</li> <li>• people in the organisation</li> <li>• system.</li> </ul>
<b><i>Feedback mechanisms</i></b> may include:	<ul style="list-style-type: none"> <li>• interviews</li> <li>• meetings</li> <li>• questionnaires</li> <li>• surveys.</li> </ul>
<b><i>Client</i></b> may include:	<ul style="list-style-type: none"> <li>• clubs</li> <li>• external organisations</li> <li>• individuals</li> <li>• internal departments</li> <li>• internal employees.</li> </ul>
<b><i>Project</i></b> may include:	<ul style="list-style-type: none"> <li>• business improvement process</li> <li>• business involved in a total organisational change</li> <li>• ebusiness solution involving the total organisation or part of the organisation</li> <li>• systems-only change.</li> </ul>

## **Unit Sector(s)**

General ICT